



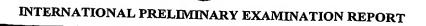


# **PCT**

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FMN-1103	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)				
International application No. PCT/JP2003/006127	International filing date 16 May 2003 (		Priority date (day/month/year) 07 June 2002 (07.06.2002)		
International Patent Classification (IPC) or national classification and IPC B01D 53/56, 53/94, 53/86, 53/72					
Applicant  JAPAN PIONICS CO., LTD.					
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of3 sheets, including this cover sheet.  This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of sheets.  3. This report contains indications relating to the following items:  I					
Date of submission of the demand		Date of completion of this report			
09 October 2003 (09.10.2003)		. 25 Fe	bruary 2004 (25.02.2004)		
Name and mailing address of the IPEA/JP		Authorized officer			
Facsimile No.		Telephone No.			



International application No.

## PCT/JP2003/006127

I. Basis of the report	1 C1/3F2003/00012/
1. With regard to the elements of the international application:*	
the international application as originally filed	
<b>,</b>	
the description:	
pages	, as originally filed
pages	, filed with the demand
pages, filed with the lett	ter of
the claims:	
pages	, as originally filed
pages, as amended (	
pages	, filed with the demand
pages, filed with the letter	er of
the drawings:	
pages	, as originally filed
pages	filed with the demand
pages, filed with the letter	er of
the sequence listing part of the description:	
nager	, as originally filed
	, filed with the demand
, filed with the lette	
2. With regard to the language, all the elements marked above were available or furnishe the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language the language of a translation furnished for the purposes of international search (unternational application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international prelimor 55.3).	nder Rule 23.1(b)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the i preliminary examination was carried out on the basis of the sequence listing:  contained in the international application in written form.	international application, the international
filed together with the international application in computer readable form.	
furnished subsequently to this Authority in written form.	
furnished subsequently to this Authority in computer readable form.	
	•
The statement that the subsequently furnished written sequence listing document international application as filed has been furnished.	
The statement that the information recorded in computer readable form is ide been furnished.	entical to the written sequence listing has
The amendments have resulted in the cancellation of:	
the description, pages	
the claims, Nos.	
the drawings, sheets/fig	
This report has been established as if (some of) the amendments had not been ma beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c))	ade, since they have been considered to go
* Replacement sheets which have been furnished to the receiving Office in response to an in this report as "originally filed" and are not annexed to this report since they and 70.17).	ao not contain amendments (Rule 70.16
* Any replacement sheet containing such amendments must be referred to under item 1 and	l annexed to this report.

## PCT/JP03/06127

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

<ul> <li>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;</li> <li>citations and explanations supporting such statement</li> </ul>				
Claims	3-5, 9-13, 15-17	YES		
Claims	1, 2, 6-8, 14, 18	NO		
Claims	3-5, 9-13, 15-17	YES		
Claims	1, 2, 6-8, 14, 18	NO		
Claims	1-18	YES		
Claims		NO ·		
	Claims Claims Claims Claims Claims Claims Claims	Claims       3-5, 9-13, 15-17         Claims       1, 2, 6-8, 14, 18         Claims       3-5, 9-13, 15-17         Claims       1, 2, 6-8, 14, 18         Claims       1-18		

## 2. Citations and explanations

Document 1: JP, 7-185344, A (Nissan Motor Co., Ltd.), 25 July, 1995 (25.07.95)

## Claims 1, 2, 6-8, 14 and 18

The subject matters of claims 1, 2, 6-8, 14 and 18 do not appear to be novel or to involve an inventive step in view of the invention described in document 1 cited in the ISR. Document 1 describes an exhaust gas cleaning method in which the exhaust gas (containing nitrogen oxides and hydrocarbons) emitted from an internal combustion engine is brought into contact with a catalyst (cleaning agent) with palladium loaded in alumina at 500°C, for reducing the nitrogen oxides and oxidizing the hydrocarbons (see page 3, right column, lines 43-50). Furthermore, the document describes that the said palladium is a mixture consisting of metal palladium and palladium oxide (page 2, right column, lines 29-41). Moreover, the document also describes that the deterioration degree of the catalyst, i.e., the ratio of the said palladium to metal palladium or the treated amount of the exhaust gas is indirectly detected to make the air-fuel ratio leaner (to have more air introduced) (page 4, left column, line 20 to right column, line 9).

#### Claims 3-5

None of the documents cited in the ISR describes that the change in the constitution ratio between a reducing cleaning agent ingredient and an oxidizing cleaning agent ingredient is detected in reference to (1) a sampled gas, (2) the discoloration of a detecting agent, or (3) the change in the electrical resistance of the cleaning agent. This constitution is not considered to be obvious to a person skilled in the art either.

### Claims 9, 11, 13 and 15

Converting a lower valent metal oxide into a higher valent metal oxide is neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.

### Claims 10 and 12

Using a correction gas for reducing a metal oxide is neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.

### Claims 16 and 17

Using a metal and a metal oxide other than palladium as a cleaning agent is neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.